

## Environmental Protection Agency

## § 1065.122

include a vessel's propeller and a locomotive's generator.

this part if fuels are not specified in the standard-setting part.

(e) *Operator demand for shaft work.* Operator demand is defined in § 1065.1001. Command the operator demand and the dynamometer(s) to follow a prescribed duty cycle with set points for engine speed and torque as specified in § 1065.512. Refer to the standard-setting part to determine the specifications for your duty cycle(s). Use a mechanical or electronic input to control operator demand such that the engine is able to meet the validation criteria in § 1065.514 over each applicable duty cycle. Record feedback values for engine speed and torque as specified in § 1065.512. Using good engineering judgment, you may improve control of operator demand by altering on-engine speed and torque controls. However, if these changes result in unrepresentative testing, you must notify us and recommend other test procedures under § 1065.10(c)(1).

(f) *Other engine inputs.* If your electronic control module requires specific input signals that are not available during dynamometer testing, such as vehicle speed or transmission signals, you may simulate the signals using good engineering judgment. Keep records that describe what signals you simulate and explain why these signals are necessary for representative testing.

### § 1065.120 Fuel properties and fuel temperature and pressure.

(a) Use fuels as specified in subpart H of this part.

(b) If the engine manufacturer specifies fuel temperature and pressure tolerances and the location where they are to be measured, then measure the fuel temperature and pressure at the specified location to show that you are within these tolerances throughout testing.

(c) If the engine manufacturer does not specify fuel temperature and pressure tolerances, use good engineering judgment to set and control fuel temperature and pressure in a way that represents typical in-use fuel temperatures and pressures.

EFFECTIVE DATE NOTE: At 73 FR 37293, June 30, 2008, § 1065.120 was amended by revising paragraph (a), effective July 7, 2008. For the convenience of the user, the revised text is set forth as follows:

### § 1065.120 Fuel properties and fuel temperature and pressure.

(a) Use fuels as specified in the standard-setting part, or as specified in subpart H of

### § 1065.122 Engine cooling and lubrication.

(a) *Engine cooling.* Cool the engine during testing so its intake-air, oil, coolant, block, and head temperatures are within their expected ranges for normal operation. You may use laboratory auxiliary coolers and fans.

(1) If you use laboratory auxiliary fans you must account for work input to the fan(s) according to § 1065.110.

(2) See § 1065.125 for more information related to intake-air cooling.

(3) See § 1065.127 for more information related to exhaust gas recirculation cooling.

(4) Measure temperatures at the manufacturer-specified locations. If the manufacturer does not specify temperature measurement locations, then use good engineering judgment to monitor intake-air, oil, coolant, block, and head temperatures to ensure that they are in their expected ranges for normal operation.

(b) *Forced cooldown.* You may install a forced cooldown system for an engine and an exhaust aftertreatment device according to § 1065.530(a)(1).

(c) *Lubricating oil.* Use lubricating oils specified in § 1065.740.

(d) *Coolant.* For liquid-cooled engines, use coolant as specified in § 1065.745.

EFFECTIVE DATE NOTE: At 73 FR 37293, June 30, 2008, § 1065.122 was amended by revising paragraphs (a) introductory text, (a)(1), and (c), effective July 7, 2008. For the convenience of the user, the revised text is set forth as follows:

### § 1065.122 Engine cooling and lubrication.

(a) *Engine cooling.* Cool the engine during testing so its intake-air, oil, coolant, block, and head temperatures are within their expected ranges for normal operation. You may use auxiliary coolers and fans.

(1) For air-cooled engines only, if you use auxiliary fans you must account for work input to the fan(s) according to § 1065.110.

(c) *Lubricating oil.* Use lubricating oils specified in § 1065.740. For two-stroke engines that involve a specified mixture of fuel and lubricating oil, mix the lubricating oil with